



### I. Purpose

Terms such as “sunroom”, “solar room”, “solar greenhouse” and “greenhouse” are used to refer to a variety of structures accessory to Group R, Division 3 Occupancies and individual units of Group R, Division 1 Occupancies. This leads to confusion in determining whether the structure is a room addition, patio cover or solarium.

This building newsletter defines the term “solarium” and outlines Department policies on the subject.

### II. Definition

A *solarium* is defined as an enclosed structure which is accessory to a Group R, Division 3 Occupancy or an individual unit within a Group R, Division 1 Occupancy. At least 80 percent of the area of the roof and 80 percent of the area of the exterior walls must be composed of clear glazing or plastic materials which do not inhibit the passage of light.

### III. Permitted Uses

- A. In general, solariums are intended to be used only for recreational outdoor living purposes and must comply with all of the requirements listed in Section IV below.
- B. If a solarium is intended to be used strictly as a greenhouse for growing plants, all of the requirements in Section IV must be met with the exception of Item G. Ordinary annealed glass may be used in the roof as allowed by Section 2409.3, Exception 3 of the Building Code.

### IV. Requirements

- A. All zoning requirements as well as exterior wall and opening requirements per Chapter 5 of the CBC must be met and a plot plan must be submitted.
- B. Since solarium additions are accessory to R-3 Occupancies or individual units within R-1 Occupancies, no occupancy separation is required between a solarium and a dwelling unit. This is consistent with the situation involving a patio cover addition to a dwelling unit.
- C. The common wall between a solarium and a dwelling unit must be a solid wall. Existing openings must be protected by doors and windows as required to maintain a weather-resistive barrier.
- D. Ventilation must be provided for interior rooms which no longer have openings in an exterior wall due to the solarium addition. Existing rooms will be considered to be adequately ventilated if the existing forced air

unit has a “summer switch” or if a permanent exhaust fan capable of two air changes per hour is installed.

- E. Interior rooms which require natural light may take the required light through windows and glass doors which open into a solarium. Light may not be taken from a solarium through a patio or porch into interior rooms.
- F. Glass walls in a solarium must meet all the requirements of both the Building Code and the California Code of Regulations. See Building Newsletter 24-1.
- G. Glass in the roof of a solarium must comply with the requirements of CBC Section 2409.2 for glazing installed in skylights and must be protected by screens as specified in Section 2409.3. Approved plastic roof panels may be installed without any area limitation; however, plastic panels may not be used when an exterior solarium wall is within five feet of the property line for an R-1 Occupancy or three feet of the property line for a R-3 Occupancy.
- H. The solarium may be attached to the exterior wall of a sleeping room provided the emergency escape or rescue opening for the sleeping room does not open into the solarium.
- I. The solarium structure must be limited to one story or 12 feet, whichever is lower; however, it may occur above the first story.

The solarium itself must be constructed according to UBC requirements for R-1 or R-3 Occupancies. All structural design requirements applicable to the main residential unit will also apply to the solarium. Vertical and lateral stability must be provided.

Aluminum or steel-framed solariums must be designed by an engineer or architect licensed in the State of California. See Building Newsletter 1-2 for signature requirements on plans and calculations.

In general, solariums with a wood-framed structure are not required to be designed by a licensed engineer; however, when the solarium is constructed on other than a slab-on-grade foundation, a design by a licensed engineer or architect with an accompanying signature on the plans may be required.

- J. If electrical wiring and equipment are installed, they must comply with current Electrical Code requirements for exterior installation.

**V. Alternates**

If the structure cannot be classified as a solarium because it does not meet the definition or the requirements listed in Section IV above, two options exist:

- A. Fixed glazing must be changed to screening or removable plastic and the structure must be checked as a patio cover in accordance with CBC Appendix Chapter 31, Part III and Building Newsletter 31-1, or
- B. The structure must be made to comply as a room addition in accordance with the CBC, CMC, CPC, and CEC with respect to weather protection, heating, structural loading, energy conservation uses, etc.

Note that the structure must comply as a room addition if any of the following apply:

- 1. It is intended to be used as a habitable room.
  - 2. There are walk-throughs, arches or other cased openings without weather-resistive windows or doors at common walls between the structure and the dwelling unit.
  - 3 Section 1203.1 of the Building Code is used to allow individual rooms to be treated as one for purposes of light and ventilation.
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